Training tomorrow's doctors, in exercise medicine, for tomorrow's patients

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Ann B Gates

Tomorrow's doctors need to be trained to deliver safe and effective exercise advice, for tomorrow's patients. These doctors will tackle the burden of preventable diseases such as cardiovascular disease, diabetes, cancer and chronic respiratory conditions. They will also prescribe exercise as an integral part of the prevention, treatment, rehabilitation, recovery and survivorship of many chronic diseases or non-communicable diseases (NCDs).

Educating future doctors aligns with the WHO '25 by 25' goals to reduce physical inactivity by 10%, by 2025[1] and the Toronto Charter for NCD prevention: Investments that work for physical activity.[2] The Toronto Charter demonstrates that doctors are important influencers of patient behaviour and key initiators of NCD prevention actions within healthcare systems, and can influence large proportions of the population, especially their patients. Tomorrow's doctors, trained in exercise medicine, will be able to meet the burden of disease and ill health competently, confidently and capably: by being proactive on prevention and specific in their treatment with physical activity advice.

Unfortunately, undergraduate medical schools in the UK are not giving a high priority to exercise advice. Evidence shows there is widespread omission of basic teaching elements,[3] such as the Chief Medical Officer recommendations and guidance on physical activity. Without a larger commitment from medical school deans, to provide this education, tomorrow's doctors will not be equipped to provide physical activity advice and support with every patient consultation. The General Medical Council has a 'Tomorrow's Doctor's' training requirements guide.[4] We mapped the international and national exercise medicine recommendations and guidance in NCD management, against the requirements for: 'Tomorrow's Doctors.'

Exercise as a medicine, or physical activity advice as health promotion, was included in at least 76 National Institute of Health and Care Excellence (NICE) guidelines and recommendations. Exercise prescription is financially prudent.[5] Within the duties of a doctor, exercise medicine as a scientific and scholarly practice, could be mapped against five of a doctor's six core duties.

With the justification to train tomorrow's doctors in exercise medicine enshrined in these policies, an international group of exercise medicine experts developed a comprehensive package of teaching resources for medical schools to use in the undergraduate, exercise medicine curricula.

The resource is the Nottingham University Medical School, 'off the shelf' core exercise medicine and chronic disease module. This contains:

- A learning module, adapted from an existing and accredited continuous professional development (CPD) training resource[6]
- A 10 h, referenced, slide set series covering the key aspects of exercise medicine, chronic diseases and surgical care.[7] The introductory slide sets have been adapted for use with permissions, from the existing Kings College Medical School undergraduate course developed by Dr John H M Brooks in association with Dr Ann Wylie and KUMEC (King's Undergraduate Medical Education in the Community).[8]
- The national and international recommendations (plus best practice advice) for physical activity for specific NCDs.

Resource overview

The content highlights some of the 76 NICE guidance and covers:

1. Introduction to physical activity and health
2. Physiological adaptations to exercise
3. Prescribing physical activity and exercise
4. Public health and exercise
5. Cancer and exercise
6. Heart disease, stroke and peripheral artery disease and exercise
7. Hypertension and exercise
8. Type 2 diabetes and exercise
9. Mental health, severe mental health and learning disabilities and exercise
10. Dementia and exercise
11. Osteoarthritis, rheumatoid arthritis and exercise
12. Obesity and exercise
13. Chronic obstructive pulmonary disease and exercise
14. Preoperative and postoperative surgery and exercise

The content covers the context, prescription, contraindications, considerations and patient information for key NCDs, using exercise advice and support. Each presentation highlights the importance of making every contact count and providing 'teachable moments'[9] within a cradle to grave approach to promote and protect the health of patients.

The module provides undergraduate medical students with an opportunity to interactively learn how to slot exercise prescriptions into their treatment options for patients. The slide set series, together with the course module booklet (provided by Dr Brian Johnson and colleagues), offers a referenced but practical approach to training.

Course resources and materials are available to all UK medical schools, via the Medical Schools Council. This gives a base for medical schools, to add to and contribute to, from their exercise medicine/sports/primary/public health departments and local National Health Service/healthcare organisations resulting in a world class educational component for doctors. The module equips future doctors to attain the General Medical Council duties of a doctor, in the widest and most clinical sense: to protect and promote the health of patients and the public.

In summary, exercise medicine in the undergraduate medical curriculum has come of age; there is serious commitment to educate tomorrow's doctors to be confident, competent and capable of safe and effective physical activity advice in every consultation.

For further information and correspondence on this undergraduate medical school education initiative, please contact ABG (ann@exercise-works.org) or Nottingham University, School of Medicine Education Centre.

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Correspondence to Ann B Gates, ann@exercise-works.org

by: Ann Gates MRPharmS, Member of the World Heart Foundation Emerging Leaders Programme 2014. Dr Brian Johnson, General Practitioner and Honorary Medical Advisor to Public Health, Wales. Dr John H M Brooks (together with existing Kings College Medical School undergraduate course resources in association with Dr Ann Wylie and King's Undergraduate Medical Education in the Community). Dr Simon Rosenbaum PhD, Exercise Physiologist and Research Associate University of New South Wales, Australia. Dr Jane Thornton MD PhD, Resident Physician and Clinical Researcher, Policlinique Médicale Universitaire, Lausanne, Switzerland. Mr Chris Oliver MD FRCS, Consultant Trauma Orthopaedic Surgeon, Honorary Senior Lecturer Department of Orthopaedic Surgery, University of Edinburgh and Royal Infirmary of Edinburgh, Scotland. Mr Ian Ritchie FRCS, President of the Royal College of Surgeons Edinburgh, Consultant Trauma and Orthopaedic Surgeon at Forth Valley Hospital, Scotland. Steffan Griffin, Medical Student at University of Birmingham, Director at Move Eat Treat, UK. Professor James Lowe, Professor of Neuropathology, Associate Dean for Medical Education, Faculty of Medicine & Health Sciences, Nottingham University Medical School, United Kingdom. Professor Ian Hall, Dean, Faculty of Medicine and Health Sciences; Professor of Molecular Medicine, Faculty of Medicine & Health Sciences, Nottingham University Medical School, United Kingdom.

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